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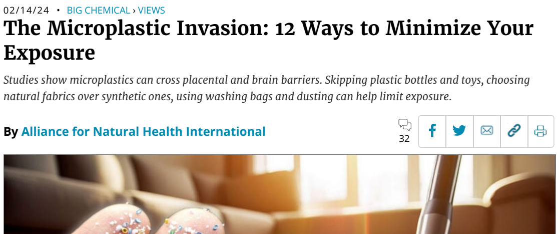
The Microplastic Invasion: 12 Ways to Minimize Your Exposure

Studies show microplastics can cross placental and brain barriers. Skipping plastic bottles and toys, choosing natural fabrics over synthetic ones, using washing bags and dusting can help limit exposure.

By Alliance for Natural Health International

32



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By Melissa Smith

- Microplastic contamination is a monumental environmental and health issue with serious consequences.
- Micro and nanoplastics have found their way into just about every nook and cranny on land, sea, air, human and animal bodies. It's in our food and the water we drink, particularly bottled water.
- It's now being implicated in a wide range of human disease processes from cancer to heart disease and neurological conditions.
- There's little we can do to avoid it, but plenty we can do to minimize our exposure.

Plastic. It's ubiquitous. From mountain tops to ocean depths, it's a part of our everyday lives. Plastic pollution is so widespread now that scientists are dubbing this period in history the "Plasticene Age."

One of the most versatile, well used and persistent substances that exist on earth, it generally isn't biodegradable. As it breaks down in the environment it gets smaller and smaller until it infiltrates just about everything in the form of micro- and nano-sized particles.

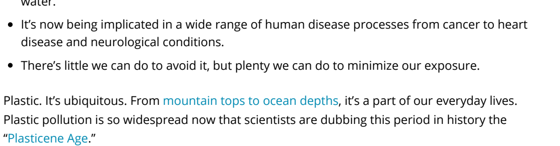
They're everywhere. In the air, water, seas, human bodies, dust, food, plants and animals. Finally, the subject of microplastics is hitting the headlines as awareness of the problem escalates.

Even water is packaged in plastic bottles. With billions of bottles of water produced and sold globally every year for people who can afford it, try and escape chlorine-, hormone- and too often, fluoride-laden tap water.

Globally consumption of bottled water is expected to reach 515 billion liters a year by 2027. But, is bottled water as safe as we think it is? A 2018 study found microplastics in 93% of the bottled water tested.

Researchers recently reported the presence of around 240,000 tiny pieces of microplastics in a 1-liter bottle of water. This is 10 to 100 times more than previous studies, which focused on larger particles of plastic.

Particles of seven of the most commonly used plastics were found along with millions of other particles of unknown origin.



The silent invasion

Microplastics can now be found in just about every nook and cranny on Earth, yet they're virtually invisible to the naked eye.

They're tiny pieces of plastic, less than five millimeters in length, that originate from a wide range of sources. Particles smaller than 1μm (micron/micrometer) are classified as nanoplastics.

Despite their pervasiveness, not much is known about microplastics and their impacts on our health and the health of the environment as yet.

Microplastic is categorized as either primary or secondary microplastic:

- Primary microplastics come from items deliberately manufactured to be small, such as clothing microfibres, microbeads and plastic pellets (known as nurdles) along with microplastics released while washing synthetic clothing.
- Secondary microplastics come from discarded plastic waste such as bags, bottles and packaging, which is said, can take up to 450 years to degrade — although not sure anyone has been able to corroborate the timing!

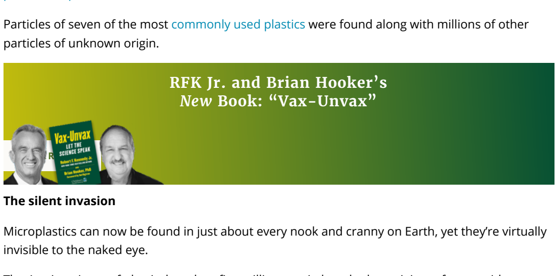
Every day we're exposed to microplastics through the air we breathe, what we eat, drink, inhale and even touch.

Microplastic particles can be small enough to cross biological barriers such as the gut, skin, placenta and airways.

Bottle-fed babies are at high risk of exposure to microplastics from baby bottles, but they've also been found in breast milk. And, let's not forget older children who often drink from plastic bottles and pouches.

Millions of tons of plastic waste end up in our oceans every year, where it's broken down by the action of the waves and sunlight into nanoplastics, which accumulate in marine food chains and habitats such as coral reefs.

Not only are microplastics a major environmental concern, but there's also growing concern over their impact on human health.



How harmful are they?

Little is known about the effects of microplastics on human health currently, leading to an explosion in research into the issue.

However, despite such limited knowledge, these tiny plastics, which are found in virtually all brands of bottled water, public drinking water supplies (although lower than bottled water), as well as most of the food we eat due to the use of biosludge from water treatment plants and plastic coatings on agricultural chemicals, have already been linked to a myriad of chronic health conditions including:

- Cancer
- Hormone imbalances
- Fertility problems
- Heart disease
- Parkinson's disease

Increasing evidence suggests that the toxicity of the endocrine-disrupting chemicals that microplastics are made from — e.g. BPA, phthalates and other toxic substances, that they absorb from the environment and concentrate — are enhanced by the size, shape and surface charge of the particles, as well as their abundance.

One study found that toxicity increased by a factor of 10. Such toxins may then be released into the human body, greatly increasing the risk of harm to health.

Microplastics are also providing new and distinct niches for microbial colonies to develop, some of which may be antibiotic resistant.

Microplastics have now been found in our blood, showing they can travel around the body, potentially ending up lodged in our organs.

They can even cross the blood-brain barrier through a process known as transcytosis, where particles can move through lipid (fat) layers like we have in our cell membranes, without being engulfed and destroyed by the cell they're crossing.

Once in the brain, they've been shown in mice to cause cognitive changes similar to those seen in dementia patients.

So great is the problem, it's been estimated that microplastic contamination cost the U.S. healthcare system nearly $250 billion in 2018.

Credit: GRID-Arendal

Reducing our exposure

As the scale of the problem becomes apparent and plastic waste continues to accumulate unabated, scientists are scrabbling to find solutions that range from using magnets to pull microplastics attached to an adsorbent from water, to enzymatic recycling, using genetically modified enzymes to break down plastic into ever smaller molecules that can then be used to create new plastic.

However, research is in its infancy and such techniques have only been used under laboratory conditions to date.

The good news is as awareness of the problem grows so do the number of innovative solutions. One such solution is the Hoola One beach vacuum, which removes microplastic particles up to 0.05 millimeters in size.

Avoiding microplastics completely is probably impossible in the modern world considering their use is so widespread.

"The Wuhan Cover-Up"
by Robert F. Kennedy Jr.
ORDER NOW

Ultimately, we're not likely to be able to avoid it, so there's little point worrying about every piece of plastic that we encounter, but we can take steps to reduce our exposure.

- Think about your plastic usage and how you might be able to reduce it e.g. not using throw-away plastic items such as cutlery and straws.
- Substitute single-use takeaway cups and bottles for your own stainless steel, bamboo or glass reusable cups and bottles.
- Recycle plastic rubbish where possible and bin waste when you're out.
- Buy food packaged in glass or try out your local Fill Up shop where you can use your own containers over and over again.
- Buy a good water filter to remove the microplastics. Reverse osmosis systems are our preferred option as they remove most of the particles, but also the vast majority of chlorine, hormones and fluoride.
- Don't heat food or liquid in plastic containers, particularly in microwaves, due to the number of particles released into your food.
- When buying clothes, try to buy natural fabrics as opposed to synthetic fabrics, which shed plastic microfibres. Natural fibres can be more expensive so why not check out your local charity shop and do a bit of recycling at the same time?
- Use a washing bag to reduce microplastic pollution when washing synthetic fabrics.
- Air dry clothes rather than using a tumble dryer, which increases the production of microfibers.
- Dust and vacuum (use a vacuum with a HEPA filter) regularly to reduce the accumulation of microplastics found in households.
- Buy plastic-free cosmetics and personal care products. Check the labels for products containing plastic microbeads.
- Ditch teabags and use organic, fairly traded loose-leaf with an infuser or old-fashioned teapot. Yep, you heard that right. Many tea bags contain plastic, which when heated can release billions of microplastics into your tea. Even so-called biodegradable tea bags, you know, the posh silky ones, are made from a type of genetically modified organism plastic and they're not silk at all!

Originally published by Alliance for Natural Health International.

Melissa Smith is the outreach and communications officer.

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views of Children's Health Defense.

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1 • Share Best Newest Oldest

Michelle Hamilton
2 months ago
Micro plastics are raining down from weather manipulation by our government as well as NASA and NOAAH. Attempts at blocking the sun and chemical trails if you're wondering how it gets everywhere even on top of mountain peaks. It must be stopped! We have people in government who don't know what the hell they are doing.
18 0 Reply Share ›

Ricky Ricardo → Michelle Hamilton
2 months ago
Thanks, Michelle for alluding to "The Elephant in the Sky". Geoengineering is the biggest existential threat to humanity! The aluminum and other elements are totally destroying everything on the planet. I see trees dying - everywhere,, because the soil is so full of aluminum that the trees are no longer able to uptake any nutrients. I tell people (constantly and continuously) that the ozone layer is being depleted by the likes of HAARP and the millions of bombs that the military loves to play with! Then there's the matter of methane emissions from under the ice and oceans. As the #1 authority on the topic says: **No ozone - no people**! Due to the ozone thinning, the sun "feels" hotter each year, because its penetrating the ozone layer (UVC waves - radiation). "Climate Change" = GEOENGINEERING! The controllers have been denying it for over 70 years; yet are now telling us that "if" we do this (spray the skies), it could help cool the planet. These psychopaths are all clinically insane!
2 0 Reply Share ›

1555 → Michelle Hamilton
2 months ago
This is why there is so much more dust in the house than used to be just some 10 years ago.
I vacuum, and vacuum and there is always more. More dust on counters too. No difference otherwise in weather, or local vegetation. Gotta be the chemtrail junk.
1 0 Reply Share ›

Pennsylvanian
2 months ago
The suggested approaches can only decrease somewhat the degree of exposure, but that's not enough.

The only solution is to switch to organic plastics made from hemp. Search YT for "hemp" & "plastic."

This is one of many reasons we must go all in for the massive reintroduction of industrial hemp into American (and global) agriculture, something our founders (especially General Washington) took for granted.

We can try to ameliorate the problem, or we can FIX it. Which way??
9 0 Reply Share ›

I_P_Frehley → Pennsylvanian
2 months ago
Hemp and hemp oil...you can make just about anything from them.
4 0 Reply Share ›

1555 → Pennsylvanian
2 months ago
Yes, hemp, not pot. Hemp is old fashioned marvel, today's pot makes people crazy.
0 0 Reply Share ›

Ricky Ricardo
2 months ago
"Limit our exposure"? Virtually every product on the market today contains either some plastic, or is made entirely from plastic. Sorry; but as they say: that horse has already left the barn! I'm still seeing styrofoam everywhere - the same styrofoam that we were told was being banned a couple of years ago. Don't worry...as the sun will soon be too hot for us to tolerate, due to the loss of the ozone layer, as a result of geoengineering, HAARP, exploding nukes, etc., over the past many decades. Humanity is now facing more than one existential threat; and what's the plans of the "science" community...spray more of the same crap into the atmosphere, to block the sun and cool the planet! We are truly living in an insane asylum! Dane Wigington often talks about the trees dying, due to aluminum and other nano-particles choking off the uptake of nutrients. This is not just talk. I see it everywhere I look. The fir trees (evergreens) that used to be full and lush all year around, are now thinning out and dying. I now see not only the trunks, but most of the branches, whereas in the past, the green totally covered the branches so that all you saw was the green. The biggest problem here is that the majority of the population are totally oblivious to their surroundings. Most are focused on their "SMART" phone - like the woman today with the baby carriage, who's focus was totally on her cellphone and I had to yell at her, so that she didn't run into me! This is definitely not an isolated incident...The Zombie Apocalypse! I'm taking it one day at a time.
8 0 Reply Share ›

yashu10 → Ricky Ricardo
2 months ago
www.geoengineeringwatch.org is the website for reputable scientific information. I agree. More people need to visit this website. Dane has been doing the research for 15 years and even has taken up NOAA aircraft with scientific instruments to capture and analyze what is actually in those horizon to horizon expanding trails of filth that they are spraying (and that we are ultimately inhaling), into the skies. It's NOT exhaust condensation! You can do the research or keep your head inserted into the sand. It's up to each of us.
9 0 Reply Share ›

Ricky Ricardo → yashu10
2 months ago
I've directed countless people to that site. Most can't be bothered and many are simply in denial. The "Dumbing Down of Society" has been a total success!
5 0 Reply Share ›

Galactic Love Team → yashu10
2 months ago
Thank you for this info! This needs to be spread far and wide! People need to wake up and know the truth so we can band together and fight these crimes against humanity!
3 0 Reply Share ›

This comment was deleted.

Galactic Love Team → Guest
2 months ago edited
Or just call it the Human Genocidal Period.

AI is next. I've been having a heated chat with a Millenial about how she's part of a team to bring VR into schools. The elite now have an agenda and have swindled the millennials into thinking it's good for science. This young teacher is gung ho saying it's going to be great so kids don't have to dissect real frogs anymore- uhhhh how bout not dissect animals AT ALL! Her name was Truth & Light. I had to laugh.
VR, AI is more plot & plan to get us AWAY from the connection of nature just as plastics have done. All these poisons and the tech devices have a purpose and that has always been to disconnect us from our beautiful earth home beneath our feet and the beauty that surrounds us in nature. We need to fight this for the children- our future! And don't even get me started on the dying bees. Ugh! What a HOT MESS this planet is. Where are the elite going once this beautiful planet is destroyed!?? Mars? ewww. And where do they live that they aren't affected by all these poisons?? These are the questions millions should be asking. If they can take five seconds to look up from their phone and see the x's in the sky or the flowers and trees and beauty that is REAL not an AI-VR lurking nightmare we could get an army of helpers. Truth is hard for many to see let alone face. What's it gonna take?
4 0 Reply Share ›

1555 → Galactic Love Team
2 months ago
I suspect the elite may not actually be human at all. Then this would all make perfect sense - to them. What is the best that could happen? This simple mantra created some amazing solutions around here...try saying it multiple times each day:

"What is the best that could happen?"
0 0 Reply Share ›

oreocracker
2 months ago
Please, please, please, get rid of thos net plastic bags fruit comes in. When you cut them open, tons of thinly plastic particles fall all over, and on the fruit, too. If u wash them, it goes down the drain.
7 0 Reply Share ›

sarahhornibrooke → oreocracker
2 months ago
And here in NZ they stick a small plastic label onto every piece of fruit from the super market.
1 0 Reply Share ›

CreoleGumbo
2 months ago
You forgot to include: Don't wear those CV face masks.
Was this a deliberate omission?
They contain microplastics that you will inhale.
5 0 Reply Share ›

Ricky Ricardo → CreoleGumbo
2 months ago
Thanks for the mention. I only read your post after I posted similar content. It's amazing how the masses can miss something so obvious.
1 0 Reply Share ›

CreoleGumbo → Ricky Ricardo
2 months ago
Ha, ha. But I forgot to mention all the plastic gloves and the empty plastic bottles of hand sanitizer that was being used up the wazoo. The whole thing has us awash in plastic.
2 0 Reply Share ›

annefarrelly
2 months ago
Because paper straws contain PFAs which dissolve in liquid, they are not a viable substitute for plastic straws as they are more harmful to human health than plastic straws. The EPA will likely ban them along with plastic straws.
5 0 Reply Share ›

1555 → annefarrelly
2 months ago
People did not use straws for thousands of years! Plus they create wrinkles above lip.
0 0 Reply Share ›

Galactic Love Team
2 months ago
I feel so bad for our children burdened with this gargantuan seemingly impossible problem. Pandora's box has been opened. How can we fully get rid of plastic? I like the hemp solution to start. Mother Earth has always been here sustaining us with her beautiful plants, each with a specific use. Where did plastic idea even come from??? My parents were baby boomers and they had aluminum foil and never used plastic. The inventor of plastic is as bad as hitler as far as I see at this point. I feel sick all the time and have thyroid issues that developed when I moved here to the Hudson Valley in 2003. My children suffer from headaches, acne etc.. We are getting sprayed here like vermin and pests!!! The smell here is horrendous much of the time- an acrid sweet chemical smell in the air. That interestingly no one can smell except those who can like me. Peopl's smellers are even dulled I've noticed- which is a brain thing. Something blocking the smell
receptors- prob planned chems to do that too put in the skytrails. We are in a valley and have the worst allergies - the officials say we are in the mid west jet stream dumping ground. That's only an 1/8 of the problem. Everyone I talk to here has Hashimoto's like I do. We are near Stewart Air Force base and I know we are being sprayed like guinea pig pests bc I see it in the sky and smell it big time since 2018. We need a friggin MILLIONS REVOLT against this slow deliberate genocide. These effers need to get the rain of justice with some fired up nuremburg trials STAT.
4 0 Reply Share ›

Ricky Ricardo
2 months ago
Did I read through this too fast; or did the author fail to mention the tons of plastic particles coming from the "covid masks" - plastic gloves - plastic "barriers" - plastic sanitizer bottles...? Does that not seem like a very serious omission? The only thing that the covid "mandates" did, was to destroy millions of people's lives and livelihoods! On the other end of the spectrum - many more millionaires and billionaires were created from all the Public-Private Partnerships!
Anyone following the WHO, already knows the B.S. they constantly regurgitate that "covid" will always be with us. Of course, I was aware of their plans from the very beginning. I'm just waiting for the middle of this year, to see if they are able to finalize their "Pandemic Preparedness Treaty". If they do pass this, it will be **Game Over** for all of us! Humanity has never faced so many existential threats at one time!
If you're still believing that "millions" of people died from "covid" (the common cold); or that there was even any "pandemic" - then shame on you! I could write a book; but let me just say that if there had been a **global pandemic**...it would have been OBVIOUS! Sorry for the repetition; but "covid" was the biggest hoax, psyops, con, deception...of all time!
3 0 Reply Share ›

1555 → Ricky Ricardo
2 months ago
Time to dismantle the WHO. One of arms of globalists, the head being UN. On surface.
2 0 Reply Share ›

Ricky Ricardo → 1555
2 months ago
WHO, WEF and UN have plans to take total control over humanity. They need to be eliminated! The Great Reset is rolling out, right under people's noses.
1 0 Reply Share ›

1555 → Ricky Ricardo
2 months ago
Don't let them succeed. We studied WWII in school. Often a few determined smart individuals managed to defeat 100x their number of invaders. Don't let them !!!!
1 0 Reply Share ›

sarahhornibrooke
2 months ago
Cancer
Hormone imbalances
Fertility problems
Heart disease
Parkinson's disease
Same ill effects as from the COVID VACCINES.
3 0 Reply Share ›

Ricky Ricardo → sarahhornibrooke
2 months ago
Yes; they love to muddy the waters and confuse the masses. Personally; I don't think they can get much more confused.
2 0 Reply Share ›

Ricky Ricardo
2 months ago
I, and a few others have posted the following topic so many times and evidently, it has been totally ignored by most people. This is the #1 Existential Threat to humanity and this could be your last chance to pay attention. We are almost out of time! We will continue to see heat records broken and the question is: How much longer will we survive this onslaught against humanity and the entire web of life?

There will be changes within the next few years (if we make it that far) that few people can even imagine.
1 0 Reply Share ›

Gary Brown
2 months ago

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